1/2   025   UNCLASSIFIED   PROCESSING DATE--04DEC70
TITLE--PROPHYLAXIS OF STAPHYLOCOCCAL COMPLICATIONS IN THE BURNED -U-

AUTHOR-(03)-PROSKUROV, V.A., KALASHNIKOV, A.P., ADAMENKO, N.N.

COUNTRY OF INFO--USSR

SOURCE--VOYENNO-MEDITSINSKIY ZHURNAL, NO 8, 1970, PP 26-28

DATE PUBLISHED-------70

SUBJECT AREAS--BIOLOGICAL AND MEDICAL SCIENCES

TOPIC TAGS--THERMAL BURN, STAPHYLOCOCCUS, PROPHYLAXIS, ANTIBIOTIC

CONTROL MARKING--NO RESTRICTIONS

DOCUMENT CLASS--UNCLASSIFIED
PROXY REEL/FRAME--3006/1048   STEP NO--UR/0177/70/000/003/0026/0028

CIRC ACCESSION NO--AP0134748
                        UNCLASSIFIED

UNCLASSIFIED   PROCESSING DATE--04DEC70

CIRC ACCESSION NO--AP0134748

ABSTRACT/EXTRACT--(U) GP-0- ABSTRACT. AT THE PRESENT TIME, ON THE BACKGROUND OF THE GROWTH OF STAPHYLOCOCCAL COMPLICATIONS EVERYWHERE, A ACONSIDERABLE INCREASE OF SUPPRATIONS OF BURNS WOUNDS IS NOTED (E. LOWBURG, I. BABB, AND V. BROWN, 1964). THIS CAN BE EXPLAINED TO A GREAT DEGREE BY LOWERING OF THE THERAPEUTIC EFFECT OF ANTIBIOTICS IN CONNECTION WITH THE EMERGENCE AND RAPID SPREAD OF STRAINS OF STAPHYLOCOCCI RESISTANT TO THEM. IT SUFFICES TO SAY THAT 78-97PERCENT OF THE STRAINS OF STAPHYLOCOCCI ISOLATED AT THE PRESENT TIME ARE RESISTNAT TO ANTIBIOTICS USED IN THE CLINIC (K. VUSKOVICH, 1966; M. G. ROGOL', 1967; V. I. GLADYSH, 1967; T. S. ZABALUYEVA AND V. G. DOROFECHUK, 1968, ETC). THIS DICTATES THE NEED TO FIND NEW AND EFFECTIVE METHODS OF COMBATING WOUND INFECTION, ESPECIALLY UNDER THE CONDITIONS OF BURN DIVISIONS.

UNCLASSIFIED

KALASHNIKOV, A. S., Moscow

"A Problem Without Initial Conditions for Second-Order, Linear, Degenerate Hyperbolic Equations With an Infinite Region of Dependence"

Abstract: The equation

$$\mathcal{L}u \equiv \psi^2(t, x)u_{tt} + \varphi(t, x)u_t - (a^{ij}(t, x)u_{x_i})_{x_j} + b^i(t, x)u_{x_i} + c(t, x)u = f(t, x) \qquad (1.1)$$

is considered in the layer $H = (0, T] \times R^n$ where addition from 1 to n is done in accordance with repeating subscripts i, j; $x = (x_1, ..., x_n)$; $a^{ij}(t, x) \equiv a^{ji}(t, x)$; the inequality $a^{ij}(t, x)\xi_i\xi_j \geqslant \mu|\xi|^2$, where $\mu = \text{const} > 0$, holds for any $(t, x) \in H$ and any real vector $\xi = (\xi_1, ..., \xi_n)$; the functions $\psi(t,x)$ and $\phi(t,x)$ are non-negative in $\bar{H}$. Thus equation (1.1) is hyperbolic at points where ψ is positive and degenerates to a parabolic equation at other points (if ϕ is positive) or to an elliptical equation (if $\phi = 0$). The author considers the problem without initial conditions but with restrictions on the permissible behavior of the solution when $|x| \to \infty$ and when $t \to 0$. A definition

1/2

USSR

KALASHNIKOV, A. S., Matematicheskiy Sbornik, Vol 88, No 4, Aug 72, pp 609-622

is given of the generalized solution of this equation, and its uniqueness is
proved. An example is given which shows that the uniqueness can be vio-
lated if the restrictions are weaker. Two theorems of existence are pre-
sented. It is assumed in the first that degeneration takes place only
when $t = 0$. The generalized solution of equation (1.1) is constructed as
a weak limit of solutions of the Cauchy problem with zero initial con-
ditions in the expanding sequence of layers $H^l = [2^{-l}T, T] \times R^n$ for equations
$\mathscr{L}u = f_l$ $(l = 1, 2, ...)$, where the f_l are finite approximations of the function f.
The second theorem of existence assumes degeneration also when t is greater
than zero, but it is assumed in addition that the inequality

$$\varphi(t, x) \leqslant m_D \psi(t, x) \quad (m_D = \mathrm{const} > 0)$$

holds for any compact $D \subset H$. This implies that $\mathrm{supp}\,\psi = \mathrm{supp}\,\varphi$. In this
case the generalized solution of (1.1) is obtained as a weak limit of so-
lutions of the Cauchy problem in H^l for the regularized equations

$$\frac{1}{l^2} u_{tt} + \frac{N}{l} u_t + \mathscr{L}u = f_l \quad (l = 1, 2, ...),$$

where N is a sufficiently large positive constant.

2/2

USSR

UDC 517.946

KALASHNIKOV, A. S., Chair of Differential Equations

"Problem Without Initial Conditions in Classes of Increasing Functions for Some Second-order Linear Degenerate Parabolic Systems. I"

Moscow, Vestnik Moskovskogo Universiteta, Seriya I -- Matematika, Mekhanika, No 2, Mar-Apr 71, pp 42-48

Abstract: The article considers systems of partial differential equations of the following forms:

$$Lu \equiv \Phi(t, x) u_t - (A_i(t, x) u_{x_j})_{x_i} + B_i(t, x) u_{x_i} + C(t, x) u = f(t, x),$$

with requirements satisfied particularly by second-order symmetric, strongly parabolic systems degenerating on arbitrary subsets $\bar{H}$, as well as first-order symmetric systems. It is assumed that the functions $\varphi^B(t,x)$ are ab-

1/2

USSR

KALASHNIKOV, A. S., Vestnik Moskovskogo Universiteta, Seriya I -- Matematika,
Mekhanika, No 2, Mar-Apr 71, pp 42-48

solutely continuous with respect to t in $\overline{H}$, their generalized derivatives
φ_t^s are bounded, and $\varphi^s(0,x) = 0$, given all $x \in E_n$ ($s = 1, \ldots, N$). Then the
Cauchy problem for system (1) in H with initial data given $t = 0$ is, generally
speaking, unsolvable. The problem without initial conditions is investigated
for this system. Proof is given of the uniqueness of the generalized solution
of (1) in classes of functions which can definitely increase, given $|x| \to$
∞ and given $t \to 0$. A definition of the generalized solution is given, as
well as an exact formulation of the uniqueness theorem. It is shown that the
constraints imposed on the admissible increase of the generalized solution are
exact. A subsequent article will deal with the question of the solvability
of system (1) in the uniqueness classes found.

2/2

- 11 -

USSR

KALASHNIKOV, G. A., Kalinin State Pedagogic Institute, Kalinin

"Training in the Exercise of Motor Functions Under Dangerous
Conditions"

Abstract: Exercise of physical ability to the fullest extent in
athletics depends on decisiveness and courage under conditions
that verge on the critical or dangerous. In the literature on
the training of athletes, principal attention is paid to the
development of motor functions, while the development of will
power and of the ability to overcome fear is disregarded,
although training under dangerous conditions with the latter aim
in view is extensively applied. In tests that have been con-
ducted, it was established that the speed plus effort reaction,
as indicated by the distance over which a jump was made, was
greater for cyclists who were required to jump over an uncovered
1/3

USSR

KALASHNIKOV, G. A., Teoriya i Praktika Fizicheskoy Kul'tury,
Vol 34, No 1, Jan 71, pp 23-25

hole in the ground 1 m wide and 0.5 m deep after cycling down an
incline that ended in a 45° rise 2.5 m long than for cyclists
who jumped over the same hole after it had been covered. The
pulse frequency of cyclists jumping over the open hole was on
the average 126+3 per min vs. 116+1 per min for cyclists jump-
ing over the covered hole. Under dangerous conditions (open
hole) the motor and autonomic reactions of the cyclists were
increased in intensity vs. those observed when the same task was
performed under less dangerous conditions (covered hole). The
greater the experience of the cyclists, the smaller was the
difference between the jump distances and pulse frequencies under
the two sets of conditions. In tests carried out on girl
gymnasts 11-12 yrs old, it was established that bending backwards
over a bench under dangerous conditions, with the bench placed
on a support 120 cm high, resulted in a lower angle of bending
(greater distance between the hands and the heel of the support-
ing foot, ensuring better equilibrium) required a longer time,
and was accompanied by a higher pulse frequency as compared with
2/3

USSR

KALASHNIKOV, G. A., Teoriya i Praktika Fizicheskoy Kul'tury,
Vol 34, No 1, Jan 71, pp 23-25

the same exercise carried out under safer conditions on a bench
placed on the floor. In similar tests carried out on women
gymnasts (candidates for the grade of master of sports), the
angle of bending and pulse beat during performance on a high
and low bench also differed, but were closer together than for
the young girls. Considerable differences were found for the
women gymnasts, however, in bending over a high bar as compared
with bending on the floor and under other conditions involving
different degrees of danger. With increasing proficiency in the
exercises acquired by training, the extent to which the body
was bent under dangerous conditions increased (the stiffening
induced by vear and constituting a protective reaction decreased).
On the basis of results obtained in such tests, ways will be
found of developing the will power and physical ability of
athletes performing under dangerous conditions.

3/3

1/2   015   UNCLASSIFIED   PROCESSING DATE--13NOV70
TITLE--PHARMACOGNOSTIC STUDY OF LEUCOJUM VERNUM -U-

AUTHOR-(02)-KALASHNIKOV, I.D., SAVICHEVA, M.V.

COUNTRY OF INFO--USSR

SOURCE--FARMATSIYA (MOSCOW) 1970, 19(1), 26-32

DATE PUBLISHED-------70

SUBJECT AREAS--BIOLOGICAL AND MEDICAL SCIENCES, CHEMISTRY

TOPIC TAGS--PHARMACOGNOSY, ALKALOID, THIN LAYER CHROMATOGRAPHY

CONTROL MARKING--NO RESTRICTIONS

DOCUMENT CLASS--UNCLASSIFIED
PROXY REEL/FRAME--3007/0141   STEP NO--UR/0466/70/019/001/0026/0032

CIRC ACCESSION NO--AP0135638
                          UNCLASSIFIED

CIRC ACCESSION NO--AP0135638

ABSTRACT/EXTRACT--(U) GP-0- ABSTRACT. THE ANATOMICAL STRUCTURE OF L.
VERNUM AS WELL AS QUANT. AND QUAL. COMPN. OF ALKALOIDS WAS STUDIED AT
THE END OF FLOWERING PERIOD.   THE FOLLOWING CHARACTERISTICS WERE FOUND:
PEDUNCLE PARENCHYM HAD AN AERENCHYM PATTERN, LEAF MESOPHYL CONTAINED
LARGE AIR CONCEPTACLES, EPIDERMIS OF ALL ORGANS WAS BUILT UP BY
PROSENCHYME TYPE CELLS, RAFIDES WERE PRESENT IN ALL ORGANS EXCEPT ROOTS,
AND PRIMARY STRUCTURE OF ROOTS WAS TRI AND TETRARCHIC. 0.32 AND
0.45PERCENT OF ALKALOIDS WERE FOUND IN THE ABOVE AND UNDERGROUND PARTS
OS PLANTS RESP. 6 ALKALOIDS WERE DETECTED BY THIN LAYER CHROMATOG.; 3
OF THEM WERE IDENTIFIED AS LYCORINE, GALANTHAMINE AND TAZETTINE.
FACILITY: L'VOV. MED. INST., LVOV, USSR.

USSR   UDC: 544.543+547.944/94

KALASHNIKOV, I. D., L'vov Medical Institute, L'vov, Ministry of Health Ukrainian
SSR

"Alkaloids of Galanthus Nivalis"

Tashkent, Khimiya Prirodnykh Soyedineniy, No 3, 1970, p 380

Abstract: Alkaloids of the epigeal and subsurface parts of G. nivalis L. collect-
ed in 1968 in the oak forest near L'vov in the mass flowering period were studied.
From the epigeal part (leaves with flower stalks and flowers), chloroform extract-
ion yielded 0.41% total alkaloids, but from the subsurface part (rhizome with
roots) extraction with 2% sulfuric acid solution yielded 38% (of weight of abso-
lutely dry plant matter). Treatment of total alkaloids from epigeal and subsur-
face parts with acetone yielded, respectively, 0.016 and 0.023% licorin (of
weight of dry matter), identified by thin-layer chromatography. Chromatography
of total alkaloids from the subsurface part yielded 0.059% ha.anthamine, 0.09%
tacettin, 0.060 nivalidin, and 0.030% narvedin; from the epigeal part -- 0.058%
halanthamin, 0.048 nivalidin, 0.062 hyppeastrin, and 0.028% narvedin.

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- h -

1/2   037   UNCLASSIFIED   PROCESSING DATE--23OCT70
TITLE--DESORPTION OF GASES DURING THE PROTON IRRADIATION OF METALS AND
    METAL METALLIC FILM SYSTEMS -U-
AUTHOR-(03)-KATRICH, N.P., KALASHNIKOV, L.N., KOSIK, N.A.

COUNTRY OF INFO--USSR

SOURCE--AT. ENERG. 1970, 28(1), 28-32

DATE PUBLISHED-------70

SUBJECT AREAS--CHEMISTRY, MATERIALS

TOPIC TAGS--METAL FILM, IRRADIATION, NICKEL PLATING, TITANIUM, PROTON

CONTROL MARKING--NO RESTRICTIONS

DOCUMENT CLASS--UNCLASSIFIED
PROXY REEL/FRAME--1997/1562   STEP NO--UR/0089/70/028/001/0028/0032

CIRC ACCESSION NO--AP0120341
                          UNCLASSIFIED

CIRC ACCESSION NO--AP0120341

ABSTRACT/EXTRACT--(U) GP-0- ABSTRACT. IN THE BOMBARDMENT OF TI, OF NI, AND OF 4 NI COATED TI FILMS, THE LAST HAVING NI THICKNESSES OF 6 TIMES 10 PRIME NEGATIVE6 1.2 TIMES 10 PRIME NEGATIVE5, 1.6 TIMES 10 PRIME NEGATIVE5, AND 2.6 TIMES 10 PRIME NEGATIVE5 CM, RESP., BY 15 KEV H PRIM POSITIVE IONS (60 MU A BEAM), THE ION IMPLANTATION COEFFS, ETA WERE 0.89, 0.25, 0.70, 0.46, 0.24, AND 0.23, RESP.: ETA INCREASED WITH INCREASING H PRIME POSITIVE ION ENERGY, AND THE RESP. VALUES FOR 35 KEV H POSITIVE IONS WERE 0.95, 0.33, C.95, 0.94, 0.85, AND 0.55. FOR TI, NI, AND TI COATED WITH THE 6 TIMES 10 PRIME NEGATIVE6 CM NI FILM, THE DESORPTION OF GASES (DISSOLVED IN THE METAL) DURING THE BOMBARDMENT WIT H PRIME POSITIVE IONS WAS SUBSTANTIAL, E.G. THE DESORPTION COEFFS. BET FOR THESE 3 MATERIALS WERE 1.12, 1.0, AND 0.6, RESP., IN THE CASE OF BOMBARDMENT WITH 10 PRIME15 IONS (IT DECREASED TO SIMILAR TO 0.25 FOR ALL 3 MATERIALS WHEN THE NO. OF IONS WAS INCREASED TO 10 PRIME17-10 PRIME18); FOR TI COATED WITH THE THICKER NI FILMS, BETA WAS NOT GREATER THAN 0.1 AND WAS INDEPENDENT OF THE NO. OF IONS. PRESUMABLY, THE DESORPTION OF GASES FROM THE BULK OF THE METAL TAKES PLACE BY DIFFUSION ALONG THE H PRIME POSITIVE TRACKS.

Plant Pathology

Abstract: The damaging effect of latent smut infection on the wheat yield
and methods of controlling these infections were studied. Ten varieties of
spring wheat and five of winter wheat were used in the investigations, carried
out from 1931 to 1954. A table was compiled indicating losses incurred from
smut on an individual farm, on the farms of a rayon, oblast, or republic, and
even in the USSR as a whole. In most cases the infection begins at the
seedling stage; the parasite penetrates and remains there in a concealed
state. This studies also established a biologically significant character-
istic of latent smut infection: in the course of the pathogenic process, it
is the least smut-resistant plants that suffer the greatest damage, indicat-
ing a process of natural selection of plants resistant to smut. The agents of
latent smut are considerably less aggressive than are the races inducing
full and open infection. The latent races therefore readily subject to con-
trol by the usual agrotechnical methods used in the treatment of wheat for
1/2

USSR

KALASHNIKOV, K. YA., Doklady Vsesoyuznoy Ordena Lenina Akademii Sel'skok-
hosyaystvennykh Nauk imeni V. I. Lenina, No 7, Jul 71, pp 17-19

smut control. Another control method is natural selection, in which smut-
resistant wheat varieties gradually become dominant, and the plants more
susceptible to smut infection are gradually eliminated. This method, however,
is not completely effective due to the constant changes in the smut races,
with the result that some of the smut-resistant varieties of grain become
susceptible to the infection. At best, only a balance between the develop-
ment of smut-resistant varieties of plants and newly developing races of
smut can be attained under these conditions.

2/2

- 28 -

USSR   UDC: 632.95

KALASHNIKOV, K. Ya., All-Union Institute of Plant Protection

"A Method for Treating Crop Seeds Before Planting"

USSR Author's Certificate No 254947, filed 4 June 68, published 2 Apr 70 (from RZh-Khimiya, No 23, 10 Dec 70, Abstract No 23 No N742 P by T. K. Yudovskaya)

Translation: The method involves disinfecting the seeds with chemical preparations (e.g., granosan /ethylmercuric chloride/ or panogen) in a foamy state. This saves 10% of the preparations.

1/1

- 86 -

USSR   UDC: 632.951:633.2

KALASHNIKOV, K. YA., and FEDOROVA, M. N., Pushkin Scientific Research Base,
All-Union Institute of Plant Protection, Leningrad, All-Union Academy of
Agricultural Sciences imeni V. I. Lenin

"Fungicide Treatment of Fodder Grass Seeds"

Moscow, Khimiya v Sel'skom Khozyaystve, Vol 8, No 4 (78), Apr 70, pp 44-46

Abstract: The authors studied 50%-TMTD (tetramethylthiuram disulfide) and
granozan in dry, liquid, and water soluble form as agents for fungicide
treatment of seeds. They concluded that TMTD should be used in treating
seeds of fodder grass, timothy grass, fescue grass, collective fodder,
canary grass, and foxtail. The recommended doses are: 3 gm of a 50% prep-
aration and 2 gm of an 80% preparation per kg of seeds. Standard granozan
in a dose of 1-1.5 gm/kg may be used to digest seeds of fodder grass by the
dry method. Digestions even 6 months prior to seeding shows no detrimental
effect on the seeds.

1/1

1/2   012   UNCLASSIFIED   PROCESSING DATE--04DEC70
TITLE--DISINFECTION OF FODDER GRASS SEEDS -U-

AUTHOR-(02)-KALASHNIKOV, K.YA., FEDOROVA, M.N.

COUNTRY OF INFO--USSR

SOURCE--KHIM. SEL. KHOZ. 1970, 8(4), 284-6

DATE PUBLISHED-------70

SUBJECT AREAS--AGRICULTURE, BIOLOGICAL AND MEDICAL SCIENCES

TOPIC TAGS--AGRICULTURE CROP SEED, FUNGICIDE

CONTROL MARKING--NO RESTRICTIONS

DOCUMENT CLASS--UNCLASSIFIED
PROXY FICHE NO----FD70/605002/C07 STEP NO--UR/0394/70/008/004/0284/0286

CIRC ACCESSION NO--AP0139433
                    UNCLASSIFIED

CIRC ACCESSION NO--AP0139433
ABSTRACT/EXTRACT--(U) GP-0-   ABSTRACT.   IN FIELD EXPTS., DRY SEED DRESSING
WITH GRANOSAN (I) AND 50PERCENT THIRAM (II) IMMEDIATELY OR 109 MONTHS
BEFORE SOWING STIMULATING THE GROWTH AND DEVELOPMENT OF MEADOW FESCUE
(FESTUCA PRATENSIS), TALL FESCUE (F. ARUNDINACEA), ORCHARD GRASS
(DACTYLIS GLOMERATA), CANARY GRASS (PHALARIS CANARIENSIS), AND MEADOW
FOXTAIL (ALOPECURUS PRATENSIS). THE SEED YIELDS OF ORCHARD GRASS,
CANARY GRASS, AND MEADOW FOXTAIL WERE HIGHER WITH II, WHEREAS THOSE OF
MEADOW FESCUE AND KENTUCKY BLUEGRASS (POA PRATENSIS) WERE HIGHER WITH I.
I AND II HAD THE SAME EFFET ON THE SEED YIELD OF TIMOTHY (PHLEUM
PRATENSE). EARLY SEED DRESSING DID NOT DECREASE THE GERMINATING
CAPACITY OF THE FODDER GRASS SEEDS. THE RECOMMENDED DOSES ARE 1-1.5 G
AND 3 G-KG SEEDS FOR I AND II, RESP.   FACILITY: NAUCH.-ISSLED.
BAZA VIZR, PUSHKINO, USSR.

UNCLASSIFIED

USSR   UDC 531.1.04

KATRICH, N. P., KALASHNIKOV, L. N., and KOSIK, N. A.

"Gas Desorption in Irradiation of Metals and Metal-Metallic Film Systems With H $\pm$ Ions"

Abstract: The article describes results of a study of gas desorption from titanium and stainless steel and the following systems: titanium-nickel film, titanium-platinum film, stainless steel-platinum film, stainless steel-nickel film, stainless steel-stainless steel (film), with the gas desorption resulting from the bombardment of the metals and metal-metallic film systems with fast H $\pm$ ions. Data are also given on a study of the dependence of the hydrogen ion trapping coefficient on the energy of the bombarded particles for titanium, nickel, and titanium coated with a nickel film of varying thickness. A vacuum was created in the measurement chamber by a system of helium and hydrogen condensation pumps.

1/2

USSR

KATRICH, N. P., et al., Atomnaya Energiya, Vol 28, No 1, Jan 70, pp 28-32

It was found that the desorption coefficient is determined by the desorption of gases adsorbed on the surface (as indicated by the high desorption coefficient for titanium, nickel, and stainless steel during the initial irradiation period) and by the desorption of gases dissolved in the volume of the metals. Experiments staged during irradiation of targets at 300 and 78° K show that desorption of gases dissolved in the volume of the metals occurs mainly as a result of thermal channel diffusion along the tracks of the fast ions. The desorption coefficient does not exceed 5-6 percent for any metal-metallic film combination. The titanium-nickel film (platinum film) combination has the advantage of a high trapping coefficient if the film thicknesses satisfy the condition $Z \ll R$, where R is the mean path depth of the H^i ions.

2/2

1/2   023   UNCLASSIFIED   PROCESSING DATE--02OCT70
TITLE--GROUND SERVICES OF SPACE FLIGHTS -U-

AUTHOR--KALASHNIKOV, N.

COUNTRY OF INFO--USSR

SOURCE--VYSHKA, JUNE 17, 1970, P 3, COLS 1-6

DATE PUBLISHED--17JUN70

SUBJECT AREAS--BIOLOGICAL AND MEDICAL SCIENCES, NUCLEAR SCIENCE AND
TECHNOLOGY
TOPIC TAGS--SPACE RADIATION, ANTIRADIATION DRUG, SPACECRAFT GROUND CONTROL

CONTROL MARKING--NO RESTRICTIONS

DOCUMENT CLASS--UNCLASSIFIED
PROXY REEL/FRAME--1989/0877   STEP NO--UR/9059/70/000/000/0003/0003

CIRC ACCESSION NO--AN0107406
                         UNCLASSIFIED

CIRC ACCESSION NO--AN0107406
ABSTRACT/EXTRACT--(U) GP-0- ABSTRACT. THE ARTICLE GIVES A VERY GENERAL
  DESCRIPTION OF GROUND SUPPORT SERVICES OF THE MANNED SPACE FLIGHTS
  CONTROL CENTER -TSENTR UPRAVLENIYA PILOTIRUYEMYMI POLETAMI- SUCH AS THE
  BALLISTICS TEAM -GRUPPA BALLISTIKI-, AND THE MEDICAL SERVICE
  -MEDITSINSKAYA SLUZHBA-, THE ANALYSIS TEAM -GRUPPA ANALIZA-. ASTRONAUTS
  A. LEONOV, V. SHATALOV, A. FILIPCHENKO, YE. KHRUNOV, V. BYKOVSKIY, AND
  V. BORBATKO TAKE PART IN FLIGHT CONTROL OPERATIONS.   THE DUTY OF ONE OF
  THE SERVICES IS TO ASSURE THE RADIATION SAFETY OF THE FLIGHT.   ITS
  MEMBERS ARE RADIOLOGISTS AND RADIOBIOLOGISTS. TWO WEEKS PRIOR TO LAUNCH
  TIME, THE ASTRONAUTS ARE GIVEN MEDICATIONS WHICH INCREASE THEIR
  RADIATION RESISTANCE. THE MEDICAL KIT CARRIED IN THE SHIP CONTAINS
  PREPARATIONS WHICH PROTECT FROM RADIATION, ALSO SOME ANTIRADIATION
  PHARMACOLOGICAL MEANS.

UNCLASSIFIED

Acc. Nr.: AN 0104559

Ref. Code: UR 9002

AUTHOR-- KALASHNIKOV, N., SCIENCE COMMENTATOR

TITLE-- AN ENGINEERING RESEARCH LABORATORY IN SPACE

NEWSPAPER-- GUDOK, JUNE 12, 1970, P 4, COLS 3-8

ABSTRACT-- ACCORDING TO KALASHNIKOV, THE BEHAVIOR OF VARIOUS STRUCTURAL COMPONENTS OF THE "SOYUZ-9" HAS BEEN THE OBJECT OF THE ASTRONAUTS ATTENTION. THE SURFACE CONDITION OF OBSERVATION WINDOWS WAS CAREFULLY OBSERVED, THE ABSOLUTE MOISTURE CONTENT WAS DETERMINED IN VARIOUS SECTIONS OF THE SHIP,S LIVING QUARTERS, AND THE DISPLACE-MENT OF VARIOUS STRUCTURAL COMPONENTS IN RELATION TO EACH OTHER, CAUSED BY THE INTERNAL PRESSURE, WAS INVESTIGATED.

REEL/FRAME
19871193

USSR   UDC   621.372.81.09

GORDIYENKO, V. I., KALASHNIKOV, N. I., GONCHARSKIY, V. N.,
L'vov

"Experimental Studies of a Single-Conductor Transmission Line
for a TE Surface Wave in the 1-10 kHz Band"

Abstract: The conditions of propagation of a TE surface wave
along isolated cylindrical conductors were checked out by
experiments providing for determination of the effect which
the radius of the wire and the permeability of the material
have on propagation of a TE wave. The experimental procedure
is described and a block diagram is given together with the
principal characteristics of the transmitting and receiving
equipment. The theoretical analysis published by N.A. Armand
(Radiotekhnika i elektronika, 1959, 4, 10) agrees with the experi-
mental data for the systems studied. Three figures, bibliog-
raphy of ten titles.
1/1

USSR   UDC 621.391.82:621.317.743.4

KALASHNIKOV, N. I.

"Problem of Effective Utilization of the Orbit of Stationary Earth Satellites"

Tr. Mosk. elektrotekhn. in-ta svyazi (Works of Moscow Electrotechnical Com-
munications Institute), 1970, vyp. 1, pp 65-70 (from RZh-Radiotekhnika, No 9,
Sep 70, Abstract No 9A102)

Translation: This article contains an investigation of noise created by sta-
tionary artificial earth satellites for ground radio relay lines. Beginning
with the allowable MKKR [International Radio Consultative Committee] recom-
mendations for noise levels, the minimum angular distance between artificial
earth satellites is determined. There are three illustrations and a three-
entry bibliography.

1/1

USSR   UDC: None

KALASHNIKOV, N. P. and KOPTELOV, E. A.

"Theory of the Shadow Effect in the Scattering of Fast Charged
Particles in Fine Single Crystals"

Abstract: The shadow effect is here defined as a reduction in the
output of particles emitted from a crystal in the direction of
tight packing, where the angular distribution of the particles
leaving the crystal is definitely anisotropic. This effect is
analyzed in this paper for the elastic scattering of fast charged
particles at large angles in a single crystal whose thickness is
specified between given limits. The thickness of the crystal is
such that the effect of channelization on the motion of the par-
ticles can be neglected. The amplitude of the scattering, the
minimum output in the direction of the crystallographic axis, and
the angular anisotropy of the shadow effect are investigated. It
is found that the theoretical results of this article agree closely
with the experimental data of such studies. The authors thank
M. I. Ryazanov and A. F. Tulinov for their discussions.

1/1

USSR

UDC 621.771.011

NIKOLAYEV, V. A., and KALASHNIKOV, P. P.

"Investigating the Distribution of Contact Stresses During Rolling Without Widening Using Optical Modelling"

Plasticheskaya Deformatsiya Metallov i Splavov, Moscow, No 64, "Metallurgiya," 1970, pp 249-258

Translation: The article shows the similarity in the distribution of specific pressures during rolling with and without widening under the same conditions (where R/H_{ave}: Beta/alpha; l_d/H_{ave} are equal), as well as the predominating influence of unevenness in the distribution of normal pressures in the deformation area on the magnitude of maximum shear stresses in the surface layers of rolls. Seven figures and two tables.

1/1

USSR   UDC 621.385.64 (088.8)

KALASHNIKOV, V. G., MEDVEDEVA, L.I., PUSHKAREV, A.G.

"M-Type Device"

USSR Author's Certificate No 278905, filed 7 August 1969, published 24 May 1971 (from RZh--Elektronika i yeye primeneniye, No 3, March 1972, Abstract No 3A70P)

Translation: A M-type device is proposed, e.g., a coaxial or a coaxially in- verted magnetron with high-speed retuning, which contains a stabilizing cavity (C) and a rotary retuning element located inside the stabilizing C and which has a slot. With the object of increasing the range of retuning, additional C are located in the side wall of the stabilizing C, with the number and size of the additional C equal to the number and size of the slots on the rotary re- tuning element.

1/1

= 90 =

USSR   UDC: 621.385.64

KALASHNIKOV, V. G., MEDVEDEVA, L. I., PUSHKAREV, A. G.

"An M-Type Instrument"

Moscow, Otkrytiya, Izobreteniya, Promyshlennyye Obraztsy, Tovarnyye Znaki, No 26,
1970, Soviet Patent No 278905, Class 21, filed 7 Aug 69, p 70

Abstract: This Author's Certificate introduces an M-type instrument such as a co-
axial or coaxially inverse magnetron with high-speed adjustment. The instrument
contains a stabilizing resonator and a rotating tuning element which has slots and
is located inside the stabilizing resonator. As a distinguishing feature of the
patent, the adjustment range is extended by placing additional resonators in the
end wall of the stabilizing resonator The number and sizes of these additional
resonators are equal to the number and sizes of the slots on the rotating tuning
element.

1/1

USSR

UDC: 8.74

BROVCHENKO, L. A., KALASHNIKOV, V. I., PISAREV, A. P.

"Determination of Distinctive Features by the Method of Random Walks"

Vestn. Khar'kov. politekhn. in-ta (Khar'kov Polytechnical Institute Herald),
1972, No 61, pp 24-27 (from RZh-Kibernetika, No 6, Jun 72, Abstract No 6V568)

Translation: The paper deals with the feasibility of using random walks
over a receptor field to isolate informative features in pattern recognition.
Organization of the random-walk process is described, and the results of
modeling are presented. Authors' abstract.

1/1

USSR

GAVRILKO, V. I., GERASIMENKO, R. T., KALASHNIKOV, V. I., KLIMENKO, A. N.

"Input of Analog Information to the M-220 Computer"

Vychisl. Mat. i Vychisl. Tekhn. [Computational Mathematics and Computer Equipment -- Collection of Works], No 2, Khar'kov, 1971, pp 151-156, (Translated from Referativnyy Zhurnal, Kibernetika, No 2, 1972, Abstract No 2 V704 by the author's).

Translation: An automatic system for input of analog information to a digital computer is described. The characteristics of the apparatus are presented. The operating mode of the M-220 in the complex and the method of writing of program for information input are described. A method is indicated for accounting for the instability of the rate of movement of the magnetic tape during input.

1/1

- 51 -

USSR   UDC 547.26'118

KALASHNIKOV, V. P., Lvov State Medical Institute, Lvov, Ministry
of Health USSR

"Heterocyclic Dithiophosphates. VI. Reaction of Pyrocatechin
With Phosphorus Pentasulfide in the Presence of Triethylamine"

Abstract: To a suspension of phosphorus pentasulfide in anhydrous
toluene pyrocatechine was added with stirring followed by more
toluene. Finally, triethylamine was added dropwise. An exothermic
reaction took place for 30-40 min, following which the mixture was
heated to 80-95° for another 30 min and cooled, yielding two
separated layers in the vessel. The lower layer was dissolved in
methanol, yielding the colorless triethylammonium salt of 2-
mercapto-2-thione-4,5-benzo-1,3,2-dioxaphospholane (I), m.p. 137-
138°. Methylation of (I) by methyl iodide in anhydrous benzene
gave 2-methylthio-2-thione-4,5-benzo-1,3,2-dioxaphospholane, m.p.
45°. Acylation of (I) with p-nitrobenzoyl chloride gave a mixed
anhydride of p-nitrobenzoyl and bicyclic dithiophosphoric acid.
1/1

USSR.

KALASHNIKOV, V. P.

"Kinetics of Hot Electrons in Quantizing Magnetic Fields.   II.   Diffusion Approximation"

Moscow, Teoreticheskaya i Matematicheskaya Fizika, Vol 6, No 6, Feb 71, pp 279-293

Abstract: Based on a nonequilibrium statistical operator, a system of equations is obtained for the balance of density of momentum and number of particles in an energy space, defining the kinetics of hot electrons in strong, crossed electrical and magnetic fields. For the case of quasi-elastic scattering, the equations obtained are converted to differential equations describing the diffusion of electrons in energy space and are integrated, in the lowest approximation, with respect to the ratio of the relaxation frequency of the transverse momentum to the frequency of cyclotron motion.

1/1

USSR

KALASHNIKOV, V. P., Candidate of Biological Sciences, YAKUBOVA, R. A.,
Candidate of Medical Sciences, and PAK, L. V., Junior Scientific Associate,
Laboratory of Radiobiochemistry and Circulation of Pesticides in the En-
vironment, and Laboratory of Hygiene and Toxicology, Uzbek Scientific
Research Institute of Sanitation, Hygiene, and Occupation Diseases

"Study of the Functional State of the Thyroid Gland With Radioactive I^{131}
After Chronic Intoxication With Small Doses of Methylmercaptophos, Hexa-
chloran, and Kilval"

Tashkent, Meditsinskiy Zhurnal Uzbekistana, No 10, Oct 70, pp 118-121

Abstract: The effect of individual insecticides and their mixtures on the
functional state of the thyroid gland in rats was studied. After the rats
were subjected to intra-abdominal intoxication with hexachloran and methyl-
mercaptophos, a slight hyperfunction of the thyroid gland was observed.
When the rats were subjected to a mixture of the two insecticides, sharply
increased hyperthyroid function was observed. The effects were enhanced
when the doses administered were increased. Kilval was introduced by in-
halation over a period of 4 months at concentrations from 0.88 to 2.95
1/2

USSR

KALASHNIKOV, V. P., et al, Meditsinskiy Zhurnal Uzbekistana, No 10, Oct 70, pp 118-121

mg/m^3. Introduced in concentrations of 0.88 to 1.7 mg/m^3, Kilval had no effect on the I^{131} absorption of the thyroid gland for 6 hr; during the first 3 days a slight (4-5 percent) drop in I^{131} absorption was observed in comparison with the controls. At concentrations of 2.95 mg/m^3, Kilval produced a slight hyperthyrosis with an increase in I^{131} in the thyroid of 9-14 percent. Chronic introduction of small quantities of the pesticides studied into the organism either intraventricularly or through the lungs affects the functional state of the thyroid gland (hypo- or hyperthyrosis). The effect depends on the chemical structure of the pesticides, their daily dose or concentration, and whether they are present in combination or alone.

2/2

USSR

KALASHNIKOV, V.P., SHEVKCLOVICH, YU.V.

UDC 621.387.1

"Method And Device For Registration Of Current-Voltage Characteristic And The Power Curve Of D-C Sources"

Otbor i peredacha inform. Resp. mezhved. sb. (Selection And Transmission Of Information. Republic Interdepartmental Collection), 1970, No 24, pp 113-118 (From RZh--Elektronika i yeye primeneniye, No 10, October 1970, Abstract No 10A154)

Translation: The advantages are considered of the dynamic method of investigating the output characteristics of thermionic converters as compared with static methods. The principal circuit is presented of a device for taking down current-voltage characteristics by the pulse method. The precision of taking down the characteristics amounts to $\sim$ 10 percent. The simplicity and convenience is noted of working with the aid of the device described. 2 ref. S.R.

1/1

- 73 -

TITLE--DERIVATION OF THE NONEQUILIBRIUM STATISTICAL OPERATOR FORM THE
  EXTREMUM OF THE INFORMATION ENTROPY -U-

AUTHOR-(02)-ZUBAREV, D.N., KALASHNIKOV, V.P.

COUNTRY OF INFO--USSR

SOURCE--PHYSICA (NETHERLANDS), VOL. 46, NO. 4, P. 550-4 (1970)

DATE PUBLISHED--------70

SUBJECT AREAS--PHYSICS

TOPIC TAGS--STATISTIC ANALYSIS, ENTROPY, THERMODYNAMIC EQUILIBRIUM

CONTROL MARKING--NO RESTRICTIONS

DOCUMENT CLASS--UNCLASSIFIED
PROXY REEL/FRAME--1992/0488   STEP NO--NE/0000/70/046/004/0550/0554

CIRC ACCESSION NO--AP0111681
                              UNCLASSIFIED

UNCLASSIFIED   PROCESSING DATE--30OCT70
CIRC ACCESSION NO--AP0111681
ABSTRACT/EXTRACT--(U) GP-O-   ABSTRACT.   IT IS SHOWN THAT THE
   NONEQUILIBRIUM STATISTICAL OPERATOR WHICH WAS OBTAINED PREVIOUSLY CAN BE
   DERIVED FROM THE REQUIREMENT THAT THE INFORMATION ENTROPY OF THE
   NONEQUILIBRIUM SYSTEM MUST HAVE AN EXTREMUM WITH A SET OF ADDITIONAL
   CONDITIONS.   THE LATTER CONDITIONS IMPLY THAT THE AVERAGE VALUES OF
   DYNAMICAL VARIABLES WHICH DETERMINE THE MACROSCOPIC STATE OF THE SYSTEM
   ARE GIVEN AT ANY MOMENT OF THE PAST T SUB1 IN THE TIME INTERVAL INFINITE
   IS MUCH LESS THAN T SUB1 IS MUCH LESS THAN T.   FACILITY: AC.
   SCI. USSR, MOSCOW.

UNCLASSIFIED

UNCLASSIFIED

TITLE--CONSTRUCTION OF STATISTICAL OPERATORS FOR NONEQUILIBRIUM PROCESSES

-U-

PROCESSING DATE--13NOV70

AUTHOR-(02)-ZUBAREV, D.N., KALASHNIKOV, V.P.

COUNTRY OF INFO--USSR

SOURCE--TEORETICHESKAYA I MATEMATICHESKAYA FIZIKA, 1970, VOL 3, NR 1, PP
126-134

DATE PUBLISHED-------70

SUBJECT AREAS--PHYSICS, MATHEMATICAL SCIENCES

TOPIC TAGS--MATHEMATIC OPERATOR, STATISTIC ANALYSIS, HAMILTONIAN,
THERMODYNAMIC ANALYSIS, KINETIC EQUATION

CONTROL MARKING--NO RESTRICTIONS

DOCUMENT CLASS--UNCLASSIFIED

PROXY REEL/FRAME--3003/1031

STEP NO--UR/0646/70/003/001/0126/0134

CIRC ACCESSION NO--AP0130066

UNCLASSIFIED

CIRC ACCESSION NO--AP0130066   UNCLASSIFIED   PROCESSING DATE--13NOV70

ABSTRACT/EXTRACT--(U) GP-0- ABSTRACT. IT IS SHOWN THAT THE
NONEQUILIBRIUM STATISTICAL OPERATOR (NSO), WHICH IS VALID FOR A
DESCRIPTION OF A SYSTEM IF TIME INTERVALS ARE MUCH LARGER THAN THE
FORGETTING TIME OF THE INITIAL DISTRIBUTION, CAN BE CONSTRUCTED AS THE
INVARIANT PART OF THE QUASI EQUILIBRIUM STATISTICAL OPERATOR IN RELATION
TO THE EVOLUTION OF A SYSTEM WITH GIVEN HAMILTONIAN H. GENERAL FORMULA
ARE OBTAINED FOR THIS FORM OF THE NSO, WHICH RELATE THERMODYNAMIC
COORDINATES AND THERMODYNAMIC FORCES; THE GENERAL EXPRESSION FOR THE
ENTROPY PRODUCTION AND GENERALIZED KINETIC EQUATIONS DESCRIBING THE TIME
EVOLUTION OF THERMODYNAMIC VARIABLES ARE ALSO OBTAINED. IT IS SHOWN
THAT THIS SCHEME OF THE THEORETICAL DESCRIPTION OF NONEQUILIBRIUM
PROCESSES IS EQUIVALENT UP TO SECOND ORDER TERMS TO THE METHOD OF QUASI
INTEGRALS OF MOTION PROPOSED BY ONE OF THE AUTHORS (1).   FACILITY:
MATEMATICHESKIY INSTITUT IM. V. A. STEKLOVA AKADEMII NAUK SSSR.

UNCLASSIFIED

USSR

UDC: 519.2

BUSLENKO, N. P., KALASHNIKOV, V. V., KOVALENKO, I. N.

"Lectures on the Theory of Complex Systems"

Moscow, Lektsii po teorii slozhnykh sistem (cf. English above), "Sov. radio", 1973, 439 pp, ill. 2 r. 7 k. (from RZh-Kibernetika, No 5, May 73, abstract No 5V277 K [annotation])

Translation: The book attempts to give a unified viewpoint in presentation of problems of constructing mathematical models, quantitative and qualitative analysis of such models for a class of objects which generalizes the types of complex systems most extensively used in technology and the national economy.
    The introductory chapters (1-3) discuss the idea of a complex system, its functional process, and also the functional characteristics and indices utilized in the design and operation of complex systems. Chapters 4-8 and 16 give an idea of present schemes of mathematical description of complex systems and their modeling. The remaining chapters of the book present some methods of quantitative and qualitative analysis of complex systems,

1/2

USSR

BUSLENKO, N. P. et al., Lektsii po teorii slozhnykh sistem, Moscow, "Sov. radio", 1973

investigate transient and steady-state conditions of operation of various structural types of systems, and also deal with questions of stability and estimates of their characteristics with respect to experimental data. The book is written for scientists, engineers, graduate students and upperclassmen working in the field of systems analysis and development of automated control systems.

2/2

26

USSR

UDC   621.371:538.569.4

ABLYAZOV, V. S., BASHARINOV, A. Ye., GORELIK, A. G., GORDON, Z. I.,
KALASHNIKOV, V. V., KUTUZA, B. G., MITNIK, L. M., PENYAZ', L. A.,
FROLOV, A. V., and FROLOV, Yu. A.

"Absorption and Radiation of the Atmosphere in the 0.5-10 cm
Range"

Translation: The method and the results of measuring the absorption
and radiation of the atmosphere for waves of 0.5-10 cm and, in par-
ticular, in the absorption bands of oxygen and water vapor, are
given. The measurements were made for the purpose of investigating
the propagation of uhf waves under various meteorological condi-
tions, which were recorded simultaneously with the radio measure-
ments. Curves are given of the attenuation and radio brightness
temperature for rain clouds. Two illustrations, bibliography of
five. N. S.

1/1

USSR   •   UDC   621.317.799:538.569.4

AKVILONOVA, A. B., GORELIK, A. K., KALASHNIKOV, V. V., KRYLOVA,
M. S., KUTUZA B. G., KUKHARSKAYA, N. F., MITNIK, L. M., PUZANOV,
V. A., and FROLOV, Yu. A.

"Measuring the Full Absorption in a Cloudless Atmosphere in the
0.55-0.59 Range"

Moscow, V sb. X Vses. konf. po rasprostr. radiovoln. Tezisy dokl.
(Tenth All-Union Conference on the Propagation of Radio Waves;
Report Theses--collection of works) "Nauka," 1972, pp 8-11 (from
RZh--Radiotekhnika, No 10, 1972, Abstract No 10A422)

Translation: Experimental data is given on the full absorption of
radio waves in a cloudless atmosphere in the 0.55-0.59 cm range,
with simultaneous recording of vertical profiles for temperature,
pressure, and humidity at the observation point. Resume

1/1

USSR   UDC 519.2:62-50

KALASHNIKOV, V. V.

"Analysis of the Functioning of Complex Systems Using Qualitative Methods"

Moscow, Vopr. konkretn. sistemn. issled.--Sbornik (Problems of Specific System Analysis -- Collection of Works), 1970, pp 26-30 (from Referativnyy Zhurnal -- Matematika, No 6, June 71, Abstract No 6V257, by R. Liptser)

Translation: Problems of the regularity, probability-boundedness, and the random Markov process with discrete time are solved, along with a problem of finding part of the trajectories of these processes in a fixed region of phase space. The method of solving these problems is similar to the second Lyapunov method. It is shown that the solution of these problems can prove useful when investigating problems in queuing theory.

1/1

- 31 -

USSR

UDC 519.217

KALASHNIKOV, V. V.

"Investigation and Estimation of Characteristics of Queueing System Using Analogues of the Direct Method of Lyapunov"

Bol'shiye Sistemy. Massovoye Obsluzh. Nadezhnost' [Large Systems. Queueing. Reliability -- Collection of Works], Moscow, Nauka Press, 1970, pp 209-218 (Translated from Referativnyy Zhurnal Kibernetika, No. 4, April, 1971, Abstract No. 4 V53).

No Abstract.

1/1

- 6 -

CIRC ACCESSION NO--AP0142759

ABSTRACT/EXTRACT--(U) GP-0- ABSTRACT. SIMULTANEOUS RADIOMETRIC AND RADAR
OBSERVATIONS, COMBINED WITH OTHER METEOROLOGICAL MEASUREMENTS, AS
DEMONSTRATED IN THIS ARTICLE, MAKE IT POSSIBLE TO DETERMINE THE MEAN
LIQUID WATER CONTENT OF LIQUID DROP CLOUDS. IF THE TOTAL WATER CONTENT
IS DETERMINED FROM RADIOMETRIC MEASUREMENTS AND RADAR IS USED IN
MEASURING THE EXTENT OF THE DROPLET PART OF TH CLOUD, THE RATIO OF THESE
VALUES WILL GIVE THE MEAN LIQUID WATER CONTENT OF THE DROPLET PART OF
THE CLOUD IN THE DIRECTION OF MEASUREMENT BECAUSE THE RADIO EMISSION OF
THE CRYSTALLINE PART OF THE CLOUD CAN BE NEGLECTED. WITH SIMULTANEOUS
MEASUREMENTS OF ABSORPTION IN A CLOUD AT SEVERAL WAVELENGTH IT IS ALSO
POSSIBLE TO ESTIMATE THE EFFECTIVE TEMPERATURE OF THE CLOUD. RADAR
MEASUREMENTS, TOGETHER WITH RADIOSONDE DATA, GIVE THE TEMPERATURE
DISTRIBUTION IN THE CLOUD AND REFINE THE EFFECTIVE TEMPERATURE. RADAR
MEASUREMENTS OF THE DROP SIZE DISTRIBUTION CAN BE USED IN AN
INTERPRETATION OF THE RADIO BRIGHTNESS TEMPERATURE OF RAIN. JOINT RADAR
AND RADIOMETRIC MEASUREMENTS WERE MADE IN 1966 AT PUSHCHINO USING THE
RADIOTELESCOPE OF THE PHYSICS INSTITUTE AT WAVELENGTHS 0.8 AND 1.6 CM
AND IN 1968 AT KIMRA USING A RADIO TELESCOPE OF THE CENTRAL AEROLOGICAL
OBSERVATORY (ANTENNA DIAMETER 3 M) AT THE WAVELENGTHS C.8 TO 1.35 CM.
THE TOTAL TIME OF CLOUD OBSERVATION WAS MORE THAN 120 HOURS. A RADAR
SET IN THE 3-CM RANGE WAS USED. THE RADIOMETRIC AND RADAR OBSERVATIONS
WERE ACCOMPANIED BY MEASUREMENTS OF THE METEOROLOGICAL PARAMETERS BY
RADIOSONDES. IN ADDITION, THE DROP SIZE DISTRIBUTION WAS MEASURED BY
SAMPLING ON FILTER PAPER.

UNCLASSIFIED

CIRC ACCESSION NO--AP0142759
ABSTRACT/EXTRACT--ALTITUDE OF THE LOWER CLOUD BOUNDARY WAS DETERMINED AND
THE RADIO EMISSION OF CLOUDS WAS ASCERTAINED AT WAVELENGTHS 0.8, 1.35
AND 1.6 CM WITH A FIXED ANTENNA WITH MOVEMENT IN AZIMUTH AT A CONSTANT
RATE. THE RESULTS OF ALL THESE INTEGRATED OBSERVATIONS ARE GIVEN. THIS
EXPERIMENT WITH THE SIMULTANEOUS USE OF THE RADIOASTRONOMICAL AND RADAR
METHODS REVEALED THAT THIS APPROACH IS VERY EFFECTIVE IN THE STUDY OF
CLOUDS AND PRECIPITATION.

UNCLASSIFIED

TITLE--EFFECT OF HIGH PRESSURE ON THE CRYSTALLIZATION OF ARSENIC AND
SULFUR GLASSES -U-

AUTHOR-(05)-TIMOFEYEVA, N.V., VINOGRADOVA, G.Z., FEKLICHEV, YE.M.,
DEMBOVSKIY, S.A., KALASHNIKOV, YA.A.

COUNTRY OF INFO--USSR

SOURCE--DOKL. AKAD. NAUK SSSR 1970, 190(4), 902-4 (PHYS CHEM)

DATE PUBLISHED-------70

SUBJECT AREAS--MATERIALS

TOPIC TAGS--HIGH PRESSURE EFFECT,   GLASS CRYSTALLIZATION,   ARSENIC
COMPOUND,   SULFUR COMPOUND,   X RAY ANALYSIS, - GLASS STRUCTURE

CONTROL MARKING--NO RESTRICTIONS

DOCUMENT CLASS--UNCLASSIFIED
PROXY REEL/FRAME--1984/1575   STEP NO--UR/0020/70/190/004/0902/0904

CIRC ACCESSION NO--AT0100193
                              UNCLASSIFIED

CIRC ACCESSION NO--AT0100193
ABSTRACT/EXTRACT--(U) GP-0- ABSTRACT. THE CRYSTN. OF AS SUB2 S SUB3
  GLASSES WAS DETD. AT 30-70 KILOBARS AND UP TO 500DEGREES. AS SUB2 S
  SUB3 CRYSTD. AT 250DEGREES AND 40-70 KILOBARS. X RAY PHASE ANAL. PROVED
  THAT THE OBTAINING CRYST. AS SUB2 S SUB3 HAS THE SAME STRUCTURE AS THE
  NATURALLY OCCURRING ORPIMENT (I). BETA AS SUB2 S SUB3 FORMED AT
  400DEGREES. IT HAS A STRUCTURE DIFFERENT THAN I. AS SUB2 S SUB5 GLASS
  (M. 190DEGREES) CRYSTD. AT GREATER THAN 250DEGREES AND 50-70 KILOBARS.
  AS SUB2 S SUB5 HAS AN ORTHORHOMBIC STRUCTURE WITH A CONGRUENT TO 10.37,
  B CONGRUENT TO 9.9, AND C CONGRUENT TO 8.66 ANGSTROM.

UNCLASSIFIED

TITLE--CIRCULATION IN THE POSTERIOR REGION OF THE HYPOTHALAMUS AND IN THE
  CEREBRAL CORTEX IN REFLEX EFFECTS -U-

AUTHOR--KALASHNIKOV, YU.G.

COUNTRY OF INFO--USSR

SOURCE--BYULLETEN' EKSPERIMENTAL'NOY BIOLOGII I MEDITSINY, 1970, VOL 69,
  NR 5, PP 19-22

DATE PUBLISHED-------70

SUBJECT AREAS--BIOLOGICAL AND MEDICAL SCIENCES

TOPIC TAGS--BRAIN, BLOOD CIRCULATION, REFLEX, CEREBRAL CORTEX

CONTROL MARKING--NO RESTRICTIONS.

DOCUMENT CLASS--UNCLASSIFIED
PROXY REEL/FRAME--1998/0368   STEP NO--UR/0219/70/069/005/0019/0022

CIRC ACCESSION NO--AP0121056
                         UNCLASSIFIED

CIRC ACCESSION NO--AP0121056
ABSTRACT/EXTRACT--(U) GP-0- ABSTRACT. IN EXPERIMENTS ON CATS AND RABBITS
   STIMULATION OF MECHANORECEPTORS OF THE GASTROINTESTINAL TRACT AND
   STIMULATION OF THE FEMORAL NERVE IN ALL CASES CAUSED AN INCREASED BLOOD
   SUPPLY TO THE POSTERIOR REGION OF THE HYPOTHALAMUS.   THE ZONAL
   CIRCULATION IN THE SOMATOSENSORY AND VISUAL ZONES OF THE CEREBRAL CORTEX
   CHANGED IN A DIVERSE MANNER. CHANGES OF THE CIRCULATION IN THE
   POSTERIOR REGION OF THE HYPOTHALAMUS DEPEND NOT ONLY UPON FLUCTUATIONS
   OF THE SYSTEMIC ARTERIAL PRESSURE, BUT ALSO ON REFLEX EFFECTS ON THE
   VASCULAR TONE OF THIS CEREBRAL AREA. THE LATENT PERIOD OF CIRCULATION
   CHANGES IN THE POSTERIOR REGION OF THE HYPOTHALAMUS IN RESPONSE TO THE
   EMPLOYED EFFECTS IS SHORTER THAN IN THE SOMATOSENSORY AND VISUAL ZONES
   OF THE CEREBRAL CORTEX.   FACILITY: INSTITUTE OF NORMAL AND
   PATHOLOGICAL PHYSIOLOGY OF THE ACADEMY OF MEDICAL SCIENCES OF THE USSR,
   MOSCOW.

UNCLASSIFIED

USSR   UDC 632.95

SEDOV, N. V., KALASHNIKOVA, G. N., and SEDOVA, N. V.

"Use of Ultrasound to Intensify Chemical Processes"

V sb. Khim. sredstva zashchity rast. (Chemical Protection of Plants --
collection of works), No 2, Moscow, 1972, pp 70-75 (from RZh-Khimiya, No 22,
25 Nov 73, Abstract No 22N549 by I Pil'menshteyn)

Translation: With $(CH_2NHCSSNH_4)_2$ as an example, it is shown that the reaction
time with the use of ultrasound is much quicker than with mechanical mixing.
Ultrasound permits considerable simplification of the apparatus of the process
because instead of reactors with a revolving stirrer and stuffing-box seal,
hermetic explosionproof apparatus that prevents CS_2 from penetrating into the
working place can be used.

1/1

TITLE---PROBLEM OF PHASE TRANSITIONS IN THE UPPER MANTLE AND ITS CONNECTION
   WITH THE EARTH'S CRUSTAL STRUCTURE -U-

AUTHOR-(02)-MAGNITSKY, V.A., KALASHNIKOVA, I.V.

COUNTRY OF INFO--USSR

SOURCE--J. GEOPHYS. RES. (USA), VOL. 75, NO. 5, P. 877-85 (10 FEB. 1970)

DATE PUBLISHED-------70

SUBJECT AREAS--EARTH SCIENCES AND OCEANOGRAPHY

TOPIC TAGS--UPPER MANTLE, EARTH CRUST, VERTICAL EARTH CRUST MOVEMENT,
   ASTHENOSPHERE

CONTROL MARKING--NO RESTRICTIONS

DOCUMENT CLASS--UNCLASSIFIED
PROXY REEL/FRAME--3007/1081   STEP NO--US/0000/70/075/005/0877/0885

CIRC ACCESSION NO--AP0136501
                           UNCLASSIFIED

CIRC ACCESSION NO--AP0136501
ABSTRACT/EXTRACT--(U) GP-0- ABSTRACT. PHASE TRANSFORMATIONS IN THE UPPER
MANTLE COULD BE CONSIDERED AS THE CAUSE OF RECENT VERTICAL CRUSTAL
MOVEMENTS. USING DATA OBTAINED IN HIGH PRESSURE EXPERIMENTS,
CALCULATIONS JUSTIFY SUCH AN ASSUMPTION. THE OSCILLATORY CHARACTER OF
MOVEMENTS WITH PERIODS 10 PRIME4-10 PRIME5 YEARS IS EXPLAINED BY THE
DECOUPLING EFFECT OF AN ASTHENOSPHERE LAYER WITH LOW VELOCITY.
FACILITY: MOSCOW STATE UNIV., USSR.

UNCLASSIFIED

105635a Dependence of the intensity of Raman spectral lines on concentration in binary solutions. Kalashnikova, L. P.; Sidorov, N. K. (USSR). Opt. Spektrosk. 1970, 28(2), 260-5 (Russ). The dependence of the intensity of polarized and depolarized Raman spectral lines on concn. in binary solns. contg. C_6H_6, PhCl, CCl_4, C_6H_{12} and EtOH has been investigated. For the solns. without EtOH the intensity increases with increasing n of the soln. The intensity corresponding to the individual component increases (decreases) with increasing (decreasing) concn. of the component in the soln. In the presence of EtOH the dependence is more complicated. The intensity of Raman spectral lines of nonpolar compd. dissolved in a polar compd. decreases, whereas the Raman spectral lines intensity of polar compd. dissolved in a nonpolar compd. increases.

V. Vesely

REEL/FRAME
19801888

1/2   010   UNCLASSIFIED   PROCESSING DATE--02OCT70
TITLE--FLUTATION OF GOLD ORES BY A FROTH SEPARATION PROCESS -U-

AUTHOR-(05)-ZELENOV, V.I., UVAROV, YU.P., GUREVICH, R.I., GORELOVA, A.N.,
KALASHNIKOVA, T.M.
COUNTRY OF INFO--USSR

SOURCE--TSVET. METAL. 1970, 43(1), 88-9

DATE PUBLISHED--------70

SUBJECT AREAS--MATERIALS, EARTH SCIENCES AND OCEANOGRAPHY

TOPIC TAGS--GOLD, ORE, QUARTZ, CHEMICAL SEPERATION, FLOTATION

CONTROL MARKING--NO RESTRICTIONS

DOCUMENT CLASS--UNCLASSIFIED
PROXY REEL/FRAME--1989/0745   STEP NO--UR/0136/70/043/001/0088/0089

CIRC ACCESSION NO--AP0107287
                              UNCLASSIFIED

CIRC ACCESSION NO--AP0107287
ABSTRACT/EXTRACT--(U) GP-0- ABSTRACT. THE PURPOSE FO THE PRESENT WORK
CONSISTED IN DETG. WHETHER THE FROTH SEPN. TECHNIQUE CAN BE USED FOR THE
SEPN. OF AU ORES. THE SEPN. WAS DONE ON A LAB. APP.   MIXTS. OF AU AND
QUARTZ POWDERS WERE SUBJECTED TO SEPN. WITH THE RESULTS OBTAINED BY
MECH. PROCESSES. FLOTATION BY FROTH SEPN. IS BOTH FASTER AND MORE
THOROUGH THAN MECH. FLOTATION.   ALSO, EXTN. OF AU IS HIGHER BY THE
FORMER PROCESS.

UNCLASSIFIED

USSR   UDC 539.1.073.7

KALASHNIKOVA, V. I., KOLYUBIN, A. A., and LEMESHKO, B. D.

"The Possibility of Controlling the Sensitivity of Photographic Emulsions
by an Electric Field"

Moscow, Pribory i Tekhnika Eksperimenta, March-April 1973, pp 76-78

Abstract: This article investigates the possibility of controlling the sensi-
tivity of photographic emulsions by an electric field when the emulsions are
used for recording ionizing particles and when the activity considered in-
volves observations of radiation from a nuclear phenomenon occurring at
random moments of time. Under these circumstances, the sensitivity of the
emulsion can be increased by applying a high-voltage pulse, synchronized
with the event of the nuclear phenomenon. Experiments with photographic
layers of the FT-101 type of emulsion under irradiation by protons with
an energy of 100 Mev were performed with the emulsion in an electric field.
At the same time the beam of protons was turned on, a high-voltage pulse
lasting 50 µs was applied to the emulsion. Control emulsions subject to
the same proton irradiation but without benefit of the electric field were
also developed. Photographs of both types of specimen are produced. It is
concluded that a photographic emulsion can be used as track detector with
controllable sensitivity.
1/1

USSR

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UDC 77.01:772.933

PEVCHEV, YU. F., KALASHNIKOVA, V. I., KONOVALOVA, L. P.

"Concerning the Mechanism of the Effect of a Pulsed Electrical Field Upon the Photographic Process"

Moscow, Zhurnal Nauchnoy i Prikladnoy Fotografii i Kinematografii, Vol 15, No 4, 1970, pp 250-256

Abstract: It is shown that the positive as well as the negative effect of the action of a pulsed electrical field, determined through the ratio of the difference in the density of blackening with the field and without the field to the density of blackening without the field, first increases linearly with an increase in the intensity of the field, and then passes into saturation. Decreasing the illumination of the photographic layer brings about a sharp increase of the effect, when the light flash is delayed with respect to the front of the voltage pulse, the effect decreases roughly exponentially with a characteristic time of about 30 microseconds. The action of the electrical field is regarded as a sequence of processes taking place in an individual emulsion microcrystal. Since the photoelectrons are displaced by the electrical field to the surface of the microcrystal, their behavior is essentially determined by the number and character of the electron traps located on a small sector of surface. The

1/4

USSR

PEVCHEV, YU. F., et al., Zhurnal Nauchnoy i Prikladnoy Fotografii i Kinematografii, Vol 15, No 4, 1970, pp 250-256

absence of a sensitivity center in the region of the accumulation of photoelectrons brings about the formation of a dispersed latent image and, in the final count, to a negative effect; the presence of a sensitivity center creates conditions for concentration of the silver of the latent image at this center, which brings about a positive effect of the action of the field. The value of the effect is determined by the relationship between the intensity of the exposure, which determines the total number of photoelectrons, and the intensity of the electrical fields, which determines the number of electrical-charge carriers required for compensation of the field in the microcrystal. The sign of the effect of the action of the electrical field is tied to the average number of sensitivity centers per microcrystal. These considerations provide an explanation for the most characteristic feature of the effect of the action of the field -- its ambiguity. They are based upon the assumption that the sign of the field action effect is determined by the probability of there being at least one sensitivity center on a comparatively small random sector of the surface of an emulsion microcrystal. It can be easily seen that this probability depends only on the average number of sensitivity centers per microcrystal of the emulsion. If the average number of sensitivity centers per microcrystal is small (of the order of 1), the

2/4

USSR

probability that there will be a sensitivity center on a small sector of the surface of a microcrystal is obviously small, and the field action effect will be negative in the overwhelming majority of microcrystals. And on the contrary, with a comparatively large number of sensitivity centers per microcrystal, the probability that a sensitivity center will randomly occur in the region of the accumulation of electrons under the action of the electrical field will be of the order of unity, and for the majority of the microcrystals of the emulsion the effect will be positive. On the other hand, it can be shown that equisensitivity of the emulsion microcrystals, and, consequently, also high contrast of the photographic emulsion, may be provided only with a comparatively large average number of centers per microcrystal. From this point of view, the mechanism of the action of the electrical field upon the structure of the latent photographic image makes it possible to understand the basic experimental fact that the investigated photographic films, being divided into two groups on the basis of the sign of the observed effect, are also divided rather clearly on the basis of their parametric properties, the positive effect being, as a rule, linked to high contrast. Moreover, it has been, shown on experimental film specimens that the positive effect of the action of the field is due to the introduction of rhodium chloride into

3/4

USSR

PEVCHEV, YU. F., et al., Zhurnal Nauchnoy i Prikladnoy Fotografii i Kinematografii, Vol. 15, No 4, 1970, pp 250-256

the emulsion in the process of its ripening, which considerably increases the contrast of the emulsion. These considerations concerning the behavior of the possible mechanism of the action of an electrical field upon the structure of the latent photographic image are basically qualitative, and explain only the general tendencies in the behavior of the observed effects.

4/4

USSR

DOVGOPOLYY, V. G., KALAYDA, Ye. I., KONOZENKO, V. I., MASHBITS, G. Ya.,
NIKITIN, A. I.

"Principles of Adjusting an Operational System for a Variable Set of
Equipment, and the Number of Solvable Problems"

Translation: Rapid and effective alignment of an operational system for
a certain set of equipment and the necessary number of problems to be
handled is one of the most urgent and most complicated problems of systems
programming. This paper describes methods of solving some aspects of
this problem; these procedures have been used in developing an oper-
ational system for the "Dnepr-2" computer. An operational system of
modular structure was used as the basis of these methods (see Ye. I.
Kalayda, V. I. Konozenko, G. Ya. Mashbits, A. I. Nikitin, "Konstruiro-
vaniye i vnedreniye novykh sredstv vychisl. tekhn.", t. 1, pp 94-96).

1/1

UDC 632.95

USSR

SUPIN, G. S., BEZUGLYY, S. F., MAKAROVA, S. V., OVSISHCHER, M. R., KALASHNI-
KOVA, V. N., MIKHEYEVA, S. YA., and ZAKS, P. G.

"Mercurometric Volumetric Method of Determining Phthalophos (With Visual and
Amperometric Endpoint)"

V sb. Khim. sredstva zashchity rast. (Chemical Agents for Plant Protection --
collection of works), vyp 1, Moscow, 1970, pp 81-83 (from RZh-Khimiya, No 11,
Jun 72, Abstract No 11N409)

Translation: A specimen containing phthalophos (I) is hydrolyzed in an
alkaline medium, the resultant dimethyl dithiophosphate is volumetrically
analyzed with 0.01 N $Hg(NO_3)_2$ in the presence of a 1% alcohol solution of
diphenylcarbazone until the pink color becomes lilac blue. Amperometric
titration is done with a vibrating platinum electrode or a dropping mercury
electrode relative to a saturated Hg_2Cl_2 electrode. The sensitivity of
amperometric titration is 0.06 mg of I, and that of the visual method is
0.6 mg of I.

1/1

- 47 -

USSR   UDC 632.95

BEZUGLYY, S. F., KALASHNIKOVA, V. N., and MIKHEYEVA, S. YA.

"Emulsion Concentrates of Phosphamide and Their Chemical Stability"

V sb. Khim. sredstva zashchity rast. (Chemical Plant Protectants --- collection of works), vyp 1, Moscow, 1970, pp 276-280 (from RZh-Khimiya, No 13, 10 Jul 72, Abstract No 13N472 by I. Pil'menshteyn)

Translation: A study was made of the chemical stability of 40% emulsifiable concentrates (EC) of phosphamide based on various solvents during storage at 1-5, 20-25 and 35°. The most stable is an EC containing cyclohexanone and OP-7. In 15 months the decomposition of the phosphamide in such an EC was 1.87% at 1-5°, 3.67% at 35°, and 2.63% at 20-25° in 25 months and 20 days.

1/1

- 69 -

KALASHNIKOVA, YE.V.

XI-3. OBTAINING THE MATERIALS OF A_3^5-A_2^6 SOLID SOLUTIONS CLOSE TO CHARACTERISTIC

[Article by Ye. V. Kalashnikova, V. I. Korzhov, T. N. Morozov, A. A. Petrov, M. A. Semikolenova, L. A. Skorobogatova, V. K. Flaksman, V. A. Khabarova, Z. N. Khabarov, Irkutsk; Novosibirsk, Ill Simpozium po Protsessam Rosta i Sinteza Poluprovodnikovykh Kristallov i Plenok, Russian, 15-17 June 1972, p 168]

A study was made of the conditions of the conditions of directional crystallization of semiconductor solid solutions of InAs-CdTe and InSb-CdTe. The distribution of the composition of the solid solutions along the ingot corresponds to a degree of state of pseudobinary systems.

It was discovered that all the crystals grown from the stoichiometric melt have limiting and constant concentration of the conduction electron ($n \approx 1 \cdot 10^{18} \mathrm{cm}^{-3}$ for InAs-CdTe and $n \approx 5 \cdot 10^{18} \mathrm{cm}^{-3}$ for InSb-CdTe) which is caused by the peculiarities of the crystallization processes of solid solutions of the A_3^5-A_2^6 type. The segregation coefficients of the A^5 and B^6 elements for crystallization of the solid solutions are found in the same ratios as pure A_3^5 compounds.

Studies were made of the possibility of obtaining materials with different concentration of the current carriers by varying the degree of stoichiometry of the investigated compound. Studies were made of the optical and the galvano-magnetic properties of the characteristic solid solutions on the materials obtained.

- 152 -

KALASHNIKOVA, YE. V.

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8

XI-5. OBTAINING COMPENSATED MATERIALS IN THE MERCURY TELLURIDE AND CADMIUM TELLURIDE SYSTEM

[Article by B. V. Vladimirov, Ye. V. Kalashnikova, V. I. Kottov, G. A. Kuz'mina, V. N. Morozov, A. A. Ryazantsev, N. A. Seinkolodnaya, E. N. Khabarov, Irkutsk Novosibirsk, III Simpozium po Protsessam Rosta i Sinteza Poluprovodnikovykh Kristallov i Plenok, Russian, 12-17 June 1972, p 170]

In this paper a study is made of the possibility of obtaining materials with maximum compensation of the characteristic electrically active states.

The large crystalline and monocrystalline barm were obtained by the Bridgman method. Determination of the composition along the bar permitted some refinement of the position of the solidus line on the diagram of state.

A study was made of the compensation of electrically active centers by alloying in a melt and by annealing the crystals in the vapors of the components. The properties of the materials obtained were determined both by optical and by galvano-magnetic measurements.

There is a detailed discussion of the problem of determining the composition of solid solutions by different methods.

- 134 -

USSR.

UDC 576.8.095.38:616-001.4-002.3

KALASHNYK, S. O., Ternopol' Medical Institute, Ternopol'

"Some Properties of Bacterial Associations Isolated From Suppurative Wounds of Surgical Patients"

Abstract: From suppurating wounds of patients who had undergone surgery or developed suppurative wounds for other reasons, associations of microorganisms consisting of 2-5 species were isolated. In 22 associations derived from the same number of patients, Staphylococci, Proteus vulgaris, gram-positive bacilli, E. coli, and B. pyocyaneus were present in 15, 13, 12, 7, and 5 cases, respectively. Formation of toxins (alpha-hemolysin, beta-hemolysin, lethal toxin) and enzymes (hyaluronidase, lecithinase, plasmacoagulase) by cultures of the associations was determined and compared with toxin formation by cultures of the individual species of microorganisms. The toxicogenic and enzyme-forming activities of the associations differed from those of the species present in them; in the majority of cases, they were less pronounced. The association of Proteus vulgaris with Staph. aureus and Staph. albus did not produce either alpha- or beta-hemolysis, while the toxins formed by individual species of this association brought about a rather intensive hemolysis of erythrocytes.

1/2

USSR

Staph. albus of this association had a lethal toxin activity that was twice as high as that of the association. A culture of B. pyocyaneus together with Proteus vulgaris produced a stronger lethal toxin effect than either of them cultivated separately. The presence of Proteus vulgaris in an association generally reinforced the lethal toxin activity. While the sensitivity of monocultures to 10 antibiotics used in tests was low, the resistance of associations to these antibiotics was higher than that of individual species grown in monocultures.

2/2

USSR   UDC: 8.74

BABITSKIY, V. A., KALATSKAYA, L. V.

"Software for a Multiterminal Teaching and Computer System Based on the Minsk-2/22"

Mat. i Inform. Probl. Prognozir. i Upr. Naukon [Mathematics and Information Prob-
lems of Prediction and Control of Science--Collection of Works], Kiev, 1971,
pp 194-201 (Translated from Referativnyy Zhurnal Kibernetika, No 11, 1972,
Abstract No 11V578, by V. Ostrovskiy)

Translation: A time-sharing system is described. Three operating modes of the
system are provided: teaching, author and teacher. The last two modes provide
high teaching effectiveness. The system and store and edit incoming information
and collect statistical data on the course of teaching. The user relates to the
system using a control language which is invariant relative to the contents of
the course being studied. The structure of the system is traditional: a super-
visor in a certain sequence runs the editor, monitor or one of the service pro-
grams. If the system is operating at less than full load, batch problems are
activated. Requests for servicing are satisfied in order of arrival (without
quantization of the servicing interval of each request).

1/1

USSR   UDC 532.596+551.46.06.8

KALATSKIY, V. P.

"Calculation of the Depth of the Upper Boundary of a Seasonal Thermocline
in the Ocean"

Tr. Gidrometeorol. n.-i. tsentr. SSSR (Works of the Hydrometeorological
Scientific Research Center of the USSR), 1972, No. 60, pp 62-66 (from
RZh-Mekhanika, No 8, Aug 72, Abstract No 8B618)

Translation: The problem of calculating the depth of the upper boundary of
a seasonal thermocline in the open ocean is discussed. The ocean has two
strata. The upper stratum is isothermal and the temperature varies with
time in accordance with the seasonal change in the surface temperature of
the ocean. The heat flow is determined at the boundary between the layers
and the solution of the heat conductivity equation obtained for the lower
layer is used. The thickness of the upper isothermal layer is determined
from average data on the heat flow through the surface of the ocean during
spring-summer heating and from calculated data on the heat flow through the
lower boundary. Calculations based on observations at a weather station
in the Pacific Ocean are given ($\phi = 50°$ north latitude, $\lambda = 145°$ west lon-
gitude). The results agree qualitatively with data from the observations.
Author's abstract.
1/1

1/2   024   UNCLASSIFIED   PROCESSING DATE--30OCT70
TITLE--USE OF CHLORO DERIVATIVES OF ISOCYANURIC ACID FOR FIBER BLEACHING
-U-
AUTHOR-(02)-BELTSOV, V.M., KALAUS, I.V.

COUNTRY OF INFO--USSR

SOURCE--TEKST. PROM. (MOSCOW) 1970, 30(2), 54-5

DATE PUBLISHED------70

SUBJECT AREAS--MATERIALS

TOPIC TAGS--RAYON, CELLULOSE, SYNTHETIC FIBER, ACETATE, OPTIC PROPERTY,
   SODIUM COMPOUND, CHLORIDE, NATURAL FIBER, CHEMICAL STABILITY

CONTROL MARKING--NO RESTRICTIONS

DOCUMENT CLASS--UNCLASSIFIED
PROXY REEL/FRAME--1992/1755   STEP NO--UR/0342/70/030/002/0054/0055

CIRC ACCESSION NO--AP0112741
                         UNCLASSIFIED

CIRC ACCESSION NO--AP0112741
ABSTRACT/EXTRACT--(U) GP-0- ABSTRACT. CELLULOSE ACETATE FIBERS (I),
POLY(ETHYLENE TEREPHTHALATE) (II) FIBERS, AND I OR II BLENDS WITH COTTON
(III) OR RAYON FIBERS WERE BLEACHED WITH 2-3 G-L. NA
DICHLOROISOCYANURATE (IV) SOLNS. IV SOLNS. WERE STABLE AT PH 3-9.5 AND
20-80DEGREES. THE OPTIMUM TEMPS. WERE 20-30DEGREES FOR I AND
60-5DEGREES FOR II OR ITS BLENDS. BLEACHING TIME WAS 25-30 MIN. THERE
WAS NO LOSS OF STRENGTH OF I OR II AFTER BLEACHING; THEIR WHITENESS
REACHED 82-85.6PERCENT. THE BLENDS OF II AND III RETAINED
95.5-97.0PERCENT OF THE ORIGINAL STRENGTH AFTER BLEACHING TO 84.2PERCENT
WHITENESS.   FACILITY: LITLP IM. KIORVA, LENINGRAD, USSR.

UNCLASSIFIED

USSR

KALAYDA, Ye. I., KONOZENKO, V. I., MASHBITS, G. Ya., NIKITIN, A. I.

"Some Problems of Systems Programming Arising with Modular Organization
of an Operational System"

Translation: Certain methods of systems programming used by the authors
in the development of the DD-3 operational system for the Dnepr-2 com-
puter are presented. Attention is drawn to the fact that the success of
development of an OS depends to a great extent on making of the proper
decisions in such problem areas as: efficient organization of the program;
revision of system expandability; special approaches for combined debugging;
methods for automatic OS generation. The authors feel that the key to the
solution of these problems lies in modular organization of the system. In
this connection, a general description of the structure and process of func-
tioning of standard modules used in the development of DD-3 is presented.

1/2

- 83 -

USSR

KALAYDA, Ye. I., KONOZENKO, V. I., MASHBITS, G. Ya., NIKITIN, A. I.
Konstrunrovaniye i vnedreniye novykh sredstv vychisl. tekhn. T. 1, Kiev,
1971, pp 94-98

The modular organization of the OS allowed a mean productivity of 8 to 10
instructions per day per programmer to be achieved in the period of writing
and debugging of the main portion of DD-3 (approximately 10,000 instructions),
and is recommended by the authors for use in developing of large programming
systems for computers.

2/2

USSR

UDC: 681.327

BLAZHKO, S. S., ZASLAVSKIY, R. I., KALAYDA, Ye. I., MASHBITS, R. Ya.,
KUKHARCHUK, A. G., NIKITIN, A. I., Institute of Cybernetics of the
Academy of Sciences of the UkrSSR, and Electronic Computer and Control
Computer Plant

"A Device for Data Transmission From the Input Unit to the Memory in
a Digital Computer"

Moscow, Otkrytiya, Izobreteniya, Promyshlennyye Obraztsy, Tovarnyye Znaki,
No 30, Oct 71, Author's Certificate No 317056, Division G, filed 27 Jun 69,
published 7 Oct 71, p 172

Translation: This Author's Certificate introduces a device for data
transmission from the input unit to the memory in a digital computer.
The device contains a data address counter and a symbol register. As
a distinguishing feature of the patent, program processing of words is
simplified by including a balance circuit, a word symbol counter, a
pattern address counter, an initial pattern address register, a space
symbol decoder, and a zero decoder for the word symbol counter. The
first output of the balance circuit is connected to the input of the
data address counter, the second output is connected to the input of

1/2

USSR

BLAZHKO, S. S. et al, Otkrytiya, Izobreteniya, Promyshlennyye Obraztsy, Tovarnyye Znaki, No 30, Oct 71

the word symbol counter, and the third output is connected to one input of the pattern address counter. Connected to the other input of the pattern address counter is the output of the initial pattern address register. The first input of the balance circuit is connected to the output of the space symbol decoder, whose input is connected to the output of the symbol register. The second input of the balance circuit is connected to the output of the word symbol counter, and the third input of the balance circuit is connected to the output of the zero decoder for the word symbol counter. The zero decoder input is connected to the output of the word symbol counter.
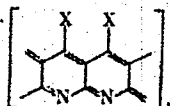
2/2

Acc. Nr. _AP0048838_   Abstracting Service: Ref. Code
                        CHEMICAL ABST.   _URO459_

91100h Polymer-analogous reactions of poly(α-chloroacrylonitrile). Chukhadzhyan, G. A.; Kalaidzhyan, A. E.; Petrosyan, V. A. (Vses. Nauch.-Issled. Inst. Polim.-Prod. USSR). Vysokomol. Soedin., Ser. A 1970, 12(1), 171-6 (Russ). The dehydrochlorination of [—CH$_2$C(CN)Cl—]$_n$ (I) (K. Kubushiro, et al., 1964) in HCONMe$_2$ soln., with LiCl, NEt$_3$, or pyridine at ~60° gave [—CH:C(CN)—]$_n$ (II) which is sol. in HCONMe$_2$ and at 150-250° cyclizes to III, which is a semiconductor (sp. vol. resis-

(III, X = H)
(VI, X = Cl)

tivity 8×10^6), not sol. in HCONMe$_2$, and stable $\leq 600°$. III was pyrolyzed at >600° to a graphite-like stable substance. Heating I gave III directly, but [CH$_2$C(CONH$_2$)Cl]$_n$ on heating lost NH$_3$ and partly decompd. The reaction of I with H$_2$S gave [—CH$_2$C(CSNH$_2$)Cl—]$_n$ which on dehydrochlorination gave [—CH:C(CSNH$_2$)—]$_n$. The chlorination of II in HCONMe$_2$ gave [—CHClC(CN)Cl—]$_n$ (IV), which at room temp. lost HCl, forming [—CCl:C(CN)—]$_n$ (V). Thermal dehydrochlorination of IV or cyclization of V gave VI which is a thermally stable semiconductor. Chlorination of V in HCONMe$_2$ gave [—CCl$_2$C(CN)Cl—]$_n$.

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19800605

KALAYKOV

JPRS 56017
17 MAY 72
UDC: 612:1

REFLECTION AND NORM IN MEDICINE

In this article we discuss some of the most significant aspects of scientific determination of the medicobiological concept of "norm" as related to the philosophical category of "reflection."

Unilateral and partial definitions of norm are often encountered in the medicobiological literature. They include purely biological, statistical, and other interpretations.

The concept of "norm" reflects one of the regular manifestations of vital processes and, more precisely, of the adaptation process. It refers to those aspects that permit the human organism to manifest maximally free, unrestrained vital activity under prevailing conditions. In other words, the concept of "norm" reflects the qualitative aspect of the adaptational process in the organism which allows it to function properly in accordance with altered living conditions. More concretely, this concept reflects the state of self-regulation of functions of the organism which provides stability of the internal environment harmoniously with external conditions and assures a "free and independent life." Claude Bernard wrote: "Stability of the inter-nal environment is the condition for free and independent life" [1].

From the standpoint of information theory and cybernetics, norm is a specific order of information expressing organization of elements in a living system, its stability. This, in turn, makes it possible to consider the norm as properties of the self-regulating and self-controlling homeostatic system of adaptation.

In order to define the concept of norm in medicine, the latter should be considered as a specific manifestation of adaptation in general. At the same time, it should also be considered in relation to the social environment and health.

The definition of "norm" as a part of a universal adaptation process indicates first of all that all aspects and properties of the adaptation

1/2   027   UNCLASSIFIED   PROCESSING DATE--18SEP70
TITLE--WET DISINFESTATION OF EMPTY STOREHOUSES WITH LEBAYCID -U-

AUTHOR-(02)-KARYAN, A.A., KALBERGENOV, G.A.

COUNTRY OF INFO--USSR

SOURCE--KHIM. SEL. KHOZ. 1970, 8(1), 27-8

DATE PUBLISHED-------70

SUBJECT AREAS--BIOLOGICAL AND MEDICAL SCIENCES

TOPIC TAGS--INSECTICIDE, INSECT CONTROL/(U)LEBAYCID INSECTICIDE

CONTROL MARKING--NO RESTRICTIONS

DOCUMENT CLASS--UNCLASSIFIED
PROXY REEL/FRAME--1990/0721   STEP NO--UR/0394/70/008/001/0027/0028

CIRC ACCESSION NO--AP0108927
                              UNCLASSIFIED

CIRC ACCESSION NO--AP0108927
ABSTRACT/EXTRACT--(U) GP-0-   ABSTRACT. LEBAYCID AT 0.5 G-M PRIME2 APPLIED
IN 0.3 L. H SUB2 O-M PRIME2 WAS FULLY EFFECTIVE AGAINST GRAIN CURCULIO,
CONFUSED FLOUR BEETLE, AND TWO SPECIES OF MEAL BEETLE.

89

UNCLASSIFIED

USSR   UDC: 62-507

YAKUBAYTIS, E. A., KALBERZIN, A. Ya.

"Upper Bound   of the Minimum Number of Internal States of One Class of
Asynchronous Finite Automata"

Riga, Avtomatika i Vychislitel'naya Tekhnika, No 4, Jul/Aug 72, pp 1-7

Abstract: The authors consider the effect which deviation from an ideal
shape of input signals has on operation of asynchronous finite automata
based on integrated circuitry. It is assumed that real signals behave
in conformity with the conditions

$$t_{0 \to 1} > 0; \quad t_{1 \to 0} > 0; \quad 1 > \beta_1 > \beta_0 > 0;$$

where $t_{0 \to 1}$ is the time of change of a signal from 0 to 1; $t_{1 \to 0}$ is the
time of change of a signal from 1 to 0; β_1 is the signal level above which
the signal is perceived by the integrated circuit as a 1; β_0 is the signal
level below which the signal is perceived as a 0. Primary tables of
transitions in such automata are presented and converted to matrices of
input states. A procedure is presented for minimizing the number of
lines in such a matrix.

1/1

1/2   023   UNCLASSIFIED   PROCESSING DATE--02OCT70
TITLE--SEARCH OF THE RAPID SPATIAL VARIATIONS OF THE INTENSITY OF THE
OXYGEN GREEN LINE -U-
AUTHOR-(04)-KALCHAYEV, K.K., KOROBEYNIKOVA, M.P., NASYROV, G.A.,
KHAMIDULINA, V.G.
COUNTRY OF INFO--USSR

SOURCE--RAZDEL IV. POLYARNYYE SIYANIYA I SVECHENIYE NOCHNOGO NEBA, 1970,
NR 18, PP 15-17
DATE PUBLISHED-------70

SUBJECT AREAS--PHYSICS, ATMOSPHERIC SCIENCES

TOPIC TAGS--OXYGEN, SPECTRAL LINE, EMISSION SPECTRUM, RADIATION SPECTRUM,
RADIATION INTENSITY

CONTROL MARKING--NO RESTRICTIONS

DOCUMENT CLASS--UNCLASSIFIED
PROXY REEL/FRAME--1994/0055   STEP NO--UR/3307/70/000/018/0015/0017

CIRC ACCESSION NO--AP0114451
                              UNCLASSIFIED

CIRC ACCESSION NO--AP0114451
ABSTRACT/EXTRACT--(U) GP-0- ABSTRACT. ACCORDING TO THE OBSERVATIONS
CARRIED OUT IN ASHKHABAD THE ENTIRE SKY WAS SCANNED IN EMISSION AT 5577
ANGSTROM WITHIN TWO OR THREE MINUTES. THE ANALYSIS OF ISOPHOTES TAKEN
AS A FILM REVEALS THE EXISTENCE OF SPOTS WHOSE SIZE VARIES IN A RAPID
PULSATING MANNER.

UNCLASSIFIED

USSR

VERTEBNYY, V. P.; KALICHENKO, A. I.; PASECHNIK, M. V. (Institute of Nuclear Research, Ukrainian Academy of Sciences)

"Level Density of Compound Nuclei in the Region A = 130-200 and Other Nuclear Properties"

Moscow, Yadernaya Fizika; July, 1972; pp 38-41

ABSTRACT: Recently at the WR-M reactor of the Institute of Nuclear Research of the Ukrainian Academy of Sciences some data on neutron resonance for a considerable number of nuclei over the range of mass numbers A = 130-192 were obtained by the time-of-flight method. These data were used to calculate the level density of compound nuclei close to the excitation energy equal to the binding energy. This paper presents data on the dependence of the mean distance between levels for a fixed excitation energy as a function of the number of neutrons in a nucleus.

1/1

1/2   014   UNCLASSIFIED   PROCESSING DATE--20NOV70

TITLE--CIRCULATORY DISTURBANCES IN THE SKIN OF THIGH STUMP DEPENDING ON
   TYPE OF THE PROSTHESIS SOCKET -U-

AUTHOR-(02)-KALCHENKO, A.S., PLOTNIK, L.G.

COUNTRY OF INFO--USSR

SOURCE--ORTOPEDIYA, TRAVMATOLOGIYA I PROTEZIROVANIYE, 1970, NR 5, PP 11-14

DATE PUBLISHED-------70

SUBJECT AREAS--BIOLOGICAL AND MEDICAL SCIENCES

TOPIC TAGS--SKIN PHYSIOLOGY, BLOOD CIRCULATION, AMPUTATION

CONTROL MARKING--NO RESTRICTIONS

DOCUMENT CLASS--UNCLASSIFIED

PROXY REEL/FRAME--3004/0748   STEP NO--UR/9115/70/000/005/0011/0014

CIRC ACCESSION NO--AP0131343

                            UNCLASSIFIED

CIRC ACCESSION NO--AP0131343
ABSTRACT/EXTRACT--(U) GP-0- ABSTRACT. THE RESULTS OF CAPILLAROSCOPIC AND
  CAPILLAROGRAPHIC STUDIES (266) OF SKIN OF THE THIGH STUMPS IN 38
  AMPUTEES EQUIPPED WITH THIGH PROSTHESES WITH TOTAL CONTACT RECEIVING
  SOCKETS AND VACUUM FIXATION ARE PRESENTED. CAPILLAROSCOPY WAS USED AS
  AN OBJECTIVE METHOD, AND AS THE MOST SIMPLE, HARMLESS AND, AT THE SAME
  TIME, SUFFICIENTLY INFORMATIVE PROCEDURE. THE OBTAINED DATA OF
  CAPILLAROSCOPY AND CAPILLAROGRAPHY PERMIT JUDGEMENT ABOUT THE PERIPHERAL
  BLOOD CIRCULATION IN THE THIGH STUMP DEPENDING ON THE METHOD OF CONTACT
  WITH THE PROSTHESIS SOCKET. THE CLINICAL OBSERVATIONS AND
  CAPILLAROSCOPIC STUDIES REVEALED THE TOTAL CONTACT SOCKET TO BE MORE
  PHYSIOLOGICAL THAN THE SUSPENDED SOCKET.   FACILITY: KHAR'KOV.
  INSTITUTA PROTEZIROVANIYA, ORTOPEDII I TRAVMATOLOGII IM. M. I. SITENKO.

UNCLASSIFIED

1/2   026   UNCLASSIFIED   PROCESSING DATE--18SEP70
TITLE--THE HEMOSTATIC EFFECT OF PRESERVED BLOOD AND BK8 SERUM -U-

AUTHOR-(03)-KALCHENKO, I.I., LYS, P.V., RYABYY, P.A.

COUNTRY OF INFO--USSR

SOURCE--KHIRURGIYA, 1970, NR 4, PP 48-54

DATE PUBLISHED-------70

SUBJECT AREAS--BIOLOGICAL AND MEDICAL SCIENCES

TOPIC TAGS--BLOOD COAGULATION, DIGESTIVE SYSTEM DISEASE, HEMORRHAGE,
   ERYTHROCYTE, BLOOD TRANSFUSION, PRESERVED BLOOD

CONTROL MARKING--NO RESTRICTIONS

DOCUMENT CLASS--UNCLASSIFIED
PROXY REEL/FRAME--1983/1238   STEP NO--UR/0531/70/000/004/0048/0054

CIRC ACCESSION NO--AP0054133
                    UNCLASSIFIED

CIRC ACCESSION NO--AP0054133
ABSTRACT/EXTRACT--(U) GP-0- ABSTRACT. THE ARTICLE SETS FORTH DATA ON
CHANGES OF THE BLOOD COAGULATION SYSTEM IN PATIENTS WITH
GASTROINTESTINAL HEMORRHAGES OF ULCEROUS ETIOLOGY, HEMOPHILIA, WERLHOF'S
DISEASE, AFTER TRANSFUSION OF PRESERVED BLOOD AND ERYTHROCYTIC
SUSPENTION OF DIVERSE STORAGE LIFE, AS WELL AS THE INFLUENCE OF BK8
SERUM ON THE BLOOD COAGULATION. BLOOD COAGULATION INDICES WERE
DYNAMICALLY STUDIED AFTER A SINGLE 6NTRODUCTION OF TRANSFUSION MEDIA IN
119 PATIENTS, OF THIS NUMBER IN 96 PATIENTS WITH GASTROINTESTINAL
HEMORRHAGE OF ULCEROUS ETIOLOGY, IN 12, WITH WERLHOF, DISEASE AND IN 11,
WITH HEMOPHILIA. AN ANALYSIS OF THE RESULTS DERIVED HAS SHOWN THAT
TRANSFUSION OF PRESERVED BLOOD WITH A STORAGE LIFE UP TO 2 WEEKS TO
PATIENTS WITH GASTROINTESTINAL HEMORRHAGES OF ULCEROUS ETIOLOGY EXERTS A
GOOD HEMOSTATIC EFFECT, THE ERITHROCYTIC SUSPENSION IS NOT ENDOWED WITH
SUCH AN ACTION. TRANSFUSION OF NATIVE PLASMA AND PRESERVED BLOOD IN A
QUANTITY OF 220 TO 250 ML TO PATIENTS WITH HEMOPHILIA AND WERLHOF'S
DISEASE IS INADEQUATE FOR THE COMPLETE ELIMINATION OF COAGULATION
DISTURBANCES CHARACTERISTIC OF THESE DISEASE. IT BECOMES NECESSARY TO
INCREASE THE DOSE OF THESE HEMOSTATIC SUBSTANCES AND SHORTEN THE
INTERVALS BETWEEN TRANSFUSIONS. THE TRANSFUSION OF BK8 SERUM CAUSES IN
THE RECIPIENT NOTICABLE BLOOD COAGULATION DISTURBANCES IN ALL THREE
PHASES. INASMUCH AS NORMALIZATION OF THE BLOOD COAGULATION IN MOST
CASES TAKES PLACE THREE DAYS AFTER TRANSFUSION OF THE SUBSTITUTE, ONE
SHOULD TAKE DUE CONSIDERATION OF THIS FACT DURING TRANSFUSIONS TO
PATIENTS SUBJECT TO OPERATIVE TREATMENT.

UNCLASSIFIED

USSR   UDC 542.91+547.853.3

KALDRIKYAN, M. A., and AROYAN, A. A., Institute of Fine Organic Chemistry, imeni A. L. Mndozhoyan, Academy of Sciences Armenian SSR, Yerevan

"Pyrimidine Derivatives. XIX.. Some N-Substituted Thiobarbituric and Barbituric Acids"

Yerevan, Armyanskiy Khimicheskiy Zhurnal, Vol 24, No 10, 1971, pp 913-917

Abstract: With the view of studying the physiological properties of the compounds obtained, N-(p-alkoxybenzyl)thioureas were reacted with malonic ester in the presence of NaOEt, whereupon N-(p-alkoxybenzyl)thiobarbituric acids formed. The latter were converted by the action of H_2O_2 into N-(p--alkoxybenzyl)barbituric acids. The N-(p-alkoxybenzyl)thioureas had been prepared by reacting p-alkoxybenzyl thiocyanates with NH_3. By the reaction of phenylthiourea with p-alkoxybenzylmalonic esters in the presence of NaOEt, N-phenyl-5-(p-alkoxybenzyl)thiobarbituric acids were obtained. These thiobarbituric acids were converted into methylmercapto derivatives by the action of MeI. The compounds synthesized are listed in tables together with their melting points.

1/1

1/2   021   UNCLASSIFIED   PROCESSING DATE--11SEP70
TITLE--POLYMERIZATION AND CYCLOTRIMERIZATION OF ACETYLENE IN THE PRESENCE
'OF COMPLEX ORGANOMETALLIC CATALYSTS -U-
AUTHOR--SHMIDT, F.K., LIPOVICH, V.G., KALECHITES, I.V.

COUNTRY OF INFO--USSR

SOURCE--KINET. KATAL. 1970, 11(1) 251-3

DATE PUBLISHED-------70

SUBJECT AREAS--CHEMISTRY

TOPIC TAGS--POLYMERIZATION, CATALYST ACTIVITY, TRANSITION METAL, COMPLEX
  COMPOUND, ACETYLENE, ORGANIC PHOSPHOROUS COMPOUND

CONTROL MARKING--NO RESTRICTIONS

DOCUMENT CLASS--UNCLASSIFIED
PROXY REEL/FRAME--1989/0204   STEP NO--UR/0195/70/011/001/0251/0253

CIRC ACCESSION NO--AP0106860
                         UNCLASSIFIED

CIRC ACCESSION NO--AP0106860

ABSTRACT/EXTRACT--(U) GP-0- ABSTRACT. THE CATALYTIC ACTIVITY OF
TRANSITION METAL ACETYLACETONA TO COMPLEXES WITH ET SUB3 AL IN POLYMN.
OF C SUB2 H SUB2 DECREASED IN THE CATION ORDER: FE LARGER THAN NI
LARGER THAN V LARGER THAN CR. IN THE PRESENCE OF NI(II) COMPLEX, C SUB2
H SUB2 GAVE C SUB6 H SUB6 AND A POLYMER. ACTIVITY AND SELECTIVITY OF
THE CATALYSTS DEPENDED ON AL-METAL,COMPLEX RATIO. WHEN THE REACTION WAS
PERFORMED IN THE PRESENCE OF AN ORGANOPHOSPHORUS COMPD. (ALONG WITH THE
CATALYST SYSTEM) THE ACTIVITY DECREASED IN THE ORDER: P(OET) SUB3
SIMILAR TO P(OPR-ISO) SUB3 LARGER THAN P(PH) SUB3 LARGER THAN P(OPH)
SUB3. THESE COMPDS. PROMOTED CYCLOTRIMERIZATION OF C SUB2 H SUB2.

USSR

KADMENSKIY, S. G., KALECHITS, V. YE., and KHLEBOSTROYEV, V. G., Voronezh
State University

"Stripping Reactions With Transfer of Two Nucleons and the Polarizability of
t, He^3"

Abstract: The possibility of explaining anomalies in reactions of the type
(t, p), (He^3, n) by the polarizability of triton or He^3 in the field of the tar-
get nucleus is examined. These reactions occur in several nuclei in the 1p-
shift when an anomalous peak is observed at zero angle in the angular distri-
bution for the case of momentum transfer $L = 2$. Computer calculations were made
to explain anomalous reactions with the aid of the polarizability of tritons for
reactions B^{10} $(t, p)B^{12}$ in which the anomaly appears most strongly in the cross
section. Calculations show that the relationship between the calculated ampli-
tudes of the reaction were little affected by variation in the width of the
potential hole. A graph of the amplitude of the reaction as a function of the

1/2

USSR

KADMENSKIY, S. G., et al, Yadernaya fizika, Vol. 12, No. 2, Aug 70, pp 302-307

scattering angle shows that the maximum amplitude as calcualted by the plane wave approximation is greater than the maximum amplitude as calculated considering the polarizability of tritons by a factor of 250. It is concluded that none of the mechanisms presently known can explain the anomalous features of the cross section of the stripping reaction with transfer of two nucleons. It is hypothesized that these characteristics can be explained only by subsequent consideration of wave distortion, including distortion of wave functions of the center of gravity of triton and the wave function of the proton.

2/2

UNCLASSIFIED

TITLE--PREPARATION OF BLOOD ABOARD SHIPS -U-

PROCESSING DATE--27NOV70

AUTHOR-(03)-GURIN, N.N., SHEVCHENKO, V.D., KALEKO, S.P.

COUNTRY OF INFO--USSR

SOURCE--VOENNO-MED ZH 1. 62-64, ILLUS. 1970

DATE PUBLISHED-------70

SUBJECT AREAS--BIOLOGICAL AND MEDICAL SCIENCES

TOPIC TAGS--BLOOD PROTEIN, BLOOD TRANSFUSION, SHIP AUXILIARY EQUIPMENT

CONTROL MARKING--NO RESTRICTIONS

DOCUMENT CLASS--UNCLASSIFIED

PROXY REEL/FRAME--3009/0138

STEP NO--UR/0177/70/001/000/0062/0064

CIRC ACCESSION NO--AP0139003

UNCLASSIFIED

CIRC ACCESSION NO--AP0139003
ABSTRACT/EXTRACT--(U) GP-0- ABSTRACT. SCHEMES FOR ORGANIZING THE
  COLLECTION AND PREPARATION OF BLOOD ABOARD VARIOUS TYPE SHIPS ARE
  PRESENTED. COLLECTION TEAMS OF 5, 9, AND 11 PERSONS ARE RECOMMENDED
  WHEN HANDLING LESS THAN 40, 41-80, AND GREATER THAN 80 DONORS,
  RESPECTIVELY.   THESE SCHEMES WERE PRACTICAL, AND BLOOD THUS COLLECTED
  HAS BEEN USED TO PREPARE BLOOD PROTEIN HYDROLYZATE, BUT IS ALSO SUITABLE
  FOR TRANSFUSION WITH NO COMPLICATIONS.

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